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AUTHOR Stewart, Richard Lee
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ABSTRACT

A competency-based culinary arts food preparation curriculum for Delaware high school students with special needs was developed during a project that included the following activities: review of the state's existing culinary arts curriculum for regular education students; incumbent worker survey administered to 24 restaurant owners/managers/assistant managers in New Castle County, Delaware, who would employ the special needs students in entry-level positions; and analysis of food service jobs listed in the U.S. Department of Labor's "Dictionary of Occupational Titles" (DOT). The 21-member Craft Advisory Committee of the New Castle County Vocational School District reviewed the revised curriculum to ensure that it met the career opportunities available to special needs students in a food preparation program. The new curriculum for special needs students contains units on the following topics: fundamentals of culinary arts, safety/sanitation, weights/measures, tools/equipment, food production/preparation, service procedures/techniques, and baking. It is designed to prepare students for entry-level positions in the following occupations: busperson; cook's helper; food prep person; pot and pan person; dish machine operator; and general sanitation/custodial worker. Appended are the following: new and original food preparations curricula; incumbent worker survey; list of restaurants surveyed; DOT extract; and advisory committee minutes. Contains 30 references. (MN)

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THE DEVELOPMENT OF A COMPETENCY BASED FOOD PREPARATIONS CURRICULUM FOR HIGH SCHOOL SPECIAL NEEDS STUDENTS IN NEW CASTLE COUNTY, DELAWARE

by

RICHARD LEE STEWART

A THESIS

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts in the
Education Graduate Program of
Delaware State University

DOVER, DELAWARE

1996

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To The Office of Graduate Studies and Research:

The members of the Committee approved the thesis of Richard Lee Stewart as presented on Tuesday, October 1, 1996. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts in Education with a major in Curriculum and Instruction.

Kathleen H Carter — Advisor — October 23, 1996 — Date

Robert L Pressley — Member — 10/23/96 — Date

Everard E Cornwall — Member — 10/23/96 — Date

Barbara N. Arya — Member — 10/24/96 — Date

APPROVED:

Anita M. Hannah — Program Director — 10/29/96 — Date

Hazel Reed — Dean of Graduate Studies and Research — 11/11/96 — Date

DEDICATION

This document is dedicated to my wife, Mary, and children Ricky, Jimmy, Kevin, Steven, and Meaghan, whose love and support gave me the encouragement which enabled me to complete this project of higher education.

A special thought is given to the memory of Mrs. Lyn Kehn, whose faith in me and other youth was the inspiration and encouragement for so many of us to seek levels of higher education.

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ABSTRACT

This thesis involved the development of a competency-based Culinary Arts food preparation curriculum for high school students with special needs.

Although there are currently several high school Culinary Arts programs in the State of Delaware, none of these programs have a curriculum which is designed to accommodate the limitations of the special needs population. This project had as its beginning consideration of the existing Culinary Arts curriculum which was designed for regular education students. The portions of the curriculum which were deemed appropriate for the special need curriculum were extracted as a basis for the new curriculum.

The project included an incumbent worker survey which was submitted to twenty-four restaurant owners, managers and/or assistant managers in New Castle County, Delaware, who would be the employers of the special needs students in entry level occupations. An analysis of the food service jobs listed in the US Department of Labor's Dictionary of Occupational Titles was conducted. During this analysis, all food service occupations which were entry level occupations were extracted as potential starting jobs for the special needs student completing the proposed curriculum.

The Craft Advisory Committee of the New Castle County Vocational School District was utilized to review all information in the development of a curriculum which was designed specifically to meet the career job opportunities of the special needs students enrolled in a Culinary Arts food preparations program. This committee consisted of twenty-one members. Four of the committee members were educational or special education specialists at the district level, eight of the committee members were

professional food service educators at the high school or college level, and the remaining nine committee members were professional restaurateurs (owners, managers and/or chefs).

The curriculum which was developed, provides instructional guidelines which can be used to direct a program in Culinary Arts food preparation which is specifically tailored for the special needs high school population.

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The Development of a Competency Based Food Preparations Curriculum for High School Special Needs Students

Chapter 1

Introduction

During the 18th century and the first half of the 19th century, education in America progressed from being a church-related function to a public tax-supported system. Free public education was an effort to educate all people; the poor as well as the rich. Higher education, though, was still a function of private institutions that only the wealthy could afford. Manual labor schools were developed as a means of preparing the poor and working classes in the skills needed for the expanding industrial market. During the 1840's and 1850's, several schools of this type were established. According to Hall (1973), these schools, supported through philanthropy, provided instruction in the areas of bricklaying, carpentry, printing, tailoring, shoemaking, brickmaking and blacksmithing. A certificate of completion qualified those who completed the program to practice in the trade without having to serve as an apprentice.

Baker (1991) stated that after the Civil War (1861-1865), education was viewed as the key to recovery and growth. As the southern states rejoined the Union, land grants for agriculture and mechanical colleges, which were provided under the Morrill Act of 1862, made education a reality for some southerners during this period. Four states (Mississippi, Virginia, South Carolina, and Kentucky) established land-grant colleges. It was not until the Second Morrill Act of 1890 that the remainder of the southern states established or designated land-grant colleges.

Baker (1991) further stated that in 1866, General Samuel Chapman Armstrong was appointed superintendent of education for the Negroes in Virginia. He developed what became the Hampton Institute. The Hampton Institute, which opened in 1868, was based on the philosophy that there was dignity in all forms of work and that human beings could only truly appreciate that which they had earned. Therefore, students at Hampton were expected to work for the school to earn their tuition. This began the manual labor school movement in America.

Hampton's most famous graduate was Booker T. Washington who in 1881 founded Tuskegee Institute. Tuskegee Institute developed programs for foundry, electricity, machine shop and stationary engineering, painting, plumbing and steamfitting, printing, tailoring, carpentry, blacksmithing, basketmaking, harness making, bricklaying, brickmaking, wheelwrighting, and tinsmithing (Baker, 1991).

The first school for the training of manual skills and tool instruction was established in St. Louis by Calvin Woodward in 1870. This was part of the engineering department of Washington University. In the following thirty five years the trade school movement rapidly expanded throughout America.

Calhoun and Finch (1983) stated that the Smith-Hughes Act of 1917 was the first in a series of acts designed to have the federal government provide the means for training skilled workers. The act provided support for vocational education at the secondary level. Calhoun and Finch (1983) stated further that other legislation passed following the Smith-Hughes Act which supported vocational education included the Fess-Kenyon Act of 1920, George-Reed Act of 1929, George Ellzey Act of 1934, George-Dean Act of 1936, LaFollette-Barden Act of 1943, George-Barden Act of 1946, Serviceman's Readjustment Act of 1944, and the National Defense Education Act of 1958. All of these acts were

directed toward improving the education of individuals through vocational education, increasing the availability of skilled workers, and thereby attacking some of the social, civic, and economic ailments of the nation.

These authors further stated that in the period since 1960 the federal government had attempted total commitment to vocational education with the partnership of states, local government, and private institutions. Federal legislation towards this goal included the Manpower Development and Training Act of 1962, Vocational Education Act of 1963, Elementary and Secondary Education Act of 1965, Vocational Education Amendments of 1968, the Education Amendments of 1972, the Comprehensive Employment and Training Act of 1973, the Education Act of Comprehensive Employment and Training Act of 1973, the Education Amendments of 1976, the Career Education Incentive Act of 1977, and the Comprehensive Employment and Training Act Amendments of 1978. The federal legislation which had been established by this time clearly demonstrated the federal support for vocational technical education at this point in the history of the United States.

Another significant piece of legislation was the Education for All Handicapped Children Act of 1975 (Public Law 94-142). This law contained significant and far-reaching provisions regarding the role of vocational education in servicing the handicapped. The purpose of the act was to insure that all handicapped children had available a free, appropriate public education emphasizing special education and related services designed to meet their unique needs, and to assist states and local agencies in providing for the education of all handicapped children. The law required that handicapped learners be educated with non-handicapped students to the maximum extent appropriate. This action was to become known as mainstreaming. The law was written

so that special classes and special schools were to be used only when the nature or severity of the handicap required supplementary services and aids that could not be effectively provided through regular classes. An individualized educational program (IEP) had to be written for each handicapped student, and teachers, counselors, and coordinators of handicapped students were required to participate in the writing of these programs (Finch and Calhoun, 1983).

In addition to the laws which were enacted, cooperative education had an influence on the educational system. Cooperative education (co-op) is one of the United States' oldest school-to-work initiatives, involving students in paid work related to their field of study. Studies conducted by the National Center for Research in Vocational Education (1995), indicate that co-op is particularly successful in creating a strong connection between school and work and improving students' attitudes toward both school and work. Bottoms (1995) states that students participating in School-to-Work programs, when properly supervised, obtain higher earnings in the first few years after leaving high school, and interestingly, students who work a moderate number of hours per week tend to perform better in school than those who do not work at all.

Vocational education, nationwide, is based on the needs of the local and regional labor markets. Technical high schools in New Castle County, Delaware, largely an urban metropolitan environment, provide more service-type occupational training programs than their counterparts in predominately rural Kent and Sussex counties. In New Castle County, the three technical high schools offer fifteen service-type occupational programs to a student population that is culturally and academically diverse. The variety of the programs and diversity of the students served provide a basis for the significance of the study.

Significance of the Study

The Carl D. Perkins Vocational and Applied Technology Educational Act of 1990, commonly known as Perkins II, revised significantly previous federal vocational education legislation. Perkins II required states to develop outcome-based accountability systems built around statewide performance measures and standards. Under the act, states were given substantial flexibility in identifying the outcomes to be measured, selecting measurement tools, and setting standards. Localities were given the principal responsibility for program improvement, with states allowed to intervene only when local programs failed to demonstrate significant progress (National Center for Research in Vocational Education, 1995). With the Perkins II as a directive, it became imperative that all vocational education programs be established so that they clearly require outcome-based accountability with specific measures, and standards with which to measure not only the progress of the student but also the effectiveness of the program itself.

In 1990, the Secretary of Labor appointed representatives from the nation's schools, businesses, unions, and government to the Secretary's Commission on Achieving Necessary Skills (SCANS). According to the Commission, its fundamental purpose was to encourage a high performance economy characterized by high skills and high wage employment. The commission was charged with determining the skills Americans, especially our young people, need to succeed in this changing economic environment. The Commission recognized a shift from nationalistic economies to global market places dominated by service industries.

The SCANS report (1992) stated further that few educators are more aware of the importance of teaching workplace know-how than those in vocational-technical education.

The report stated that vocational education can shape itself into high-performance centers for training by incorporating the SCANS foundation skills into its curriculum. Reading, writing, math, and science are currently being integrated into vocational studies to enhance the ability of students to achieve SCANS workplace competencies.

This mandate causes a paradox in the delivery of vocational programs. Since the inception of PL 94-142, vocational education has been viewed as the panacea for students identified with handicapping conditions. For more than 20 years, vocational teachers have grappled with the challenges of providing appropriate learning opportunities to prepare youth to become competent workers.

Statement of the Problem

Although there are several high school Culinary Arts Programs currently in operation in the State of Delaware, none of these programs have a curriculum which is designed to accommodate the limitations and unique learning characteristics of special needs students. Traditionally, a large population of the Culinary Arts Programs has been special needs students and there is a need for a curriculum which addresses the level of learning and the competencies needed to perform successfully on the job in industry.

Objective of the Study

The objective of this study will be to develop a Culinary Arts curriculum which will be specifically designed to meet the levels of the high school special needs student population, utilizing a research and development methodology. The curriculum will include the identification of the job titles to which these students can prepare and the specific tasks performed in accomplishing these jobs. The curriculum will take into consideration existing high school Culinary Arts curriculums and adapt them to meet the abilities of the special needs population. The DACUM (Developing A CurriculUM)

method of curriculum development will be utilized for verification of the validity of these competencies by an advisory committee and incumbent workers and supervisors in the food service industry. This list of validated competencies, through the DACUM methodology will enable the special needs student to provide potential employers with a list of specific skills which the student has mastered in the Culinary Arts program and the degree of proficiency and supervision level required by the student after employment . This will provide the potential employer with a list of specific skills and competencies on which to base his/her anticipated expectations of the student's job performance.

Teaching in context will be stressed and real-world experiences will be incorporated into the curriculum. Activities will be developed which demand that the students be active learners; that is, workers who are promoting the growth of their own knowledge as they undertake realistic tasks.

Delimitations of the Study

There appears to be evidence in the literature that the development of a vocational high school curriculum for special needs students in Culinary Arts would provide a valuable and needed addition to the instructional bank of information available to vocational high schools. Therefore, the curriculum developed in this study has the potential for use in other secondary vocational schools, with similar students, in the state of Delaware and in the nation.

For the purpose of this study and the curriculum to be designed, special needs students will include: Autistic, Educable Mentally Handicapped, Learning Disabled, and Trainable Mentally Handicapped students.

The following are delimitations of this study:

1. The evaluation of the implementation phase, designed to instruct special needs culinary arts students and prepare them for entry level positions in the food service industry, is beyond the scope of this study.

2. A follow-up study, designed to evaluate the effectiveness of the curriculum on the vocational student, is beyond the scope of this study.

3. A follow-up study, designed to evaluate the mastery of skills by the student, is beyond the scope of this study.

Limitations of the Study

The following limitations impose constraints upon the conclusions and generalizations of this study:

1. Delcastle Technical High School and the New Castle County Vocational Technical School District serve suburban and urban areas and the results may be generalizable only to similar suburban and urban areas.

2. Regardless of the research and development process involved in the development of this curriculum, the end product is dependent upon the thoroughness and quality of the original task and skill lists.

3. The background, training, teaching styles and methods of the instructors implementing this curriculum may vary significantly.

4. The availability of equipment, the facilities, and the instructional budget of the institution attempting to use the curriculum may be inadequate to properly implement this curriculum.

Definition of Terms

1. Autism. A childhood psychosis involving non-communication, withdrawal, self stimulation and cognitive and perceptual deficits (Gold, 1983).

2. Competency-Based Curriculum. This type of curriculum specifies the desired objectives or competencies in an explicit form, identifies the criteria to be applied in assessing the learner's competencies, and holds the learner accountable for meeting these objectives (Calhoun & Finch, 1982).

3. Curriculum. The sum of the learning activities and experiences that a student has under the auspices or direction of the school (Finch & Crunkilton, 1993).

4. Educable mentally handicapped (EMH). A term used by educators to refer to individuals who have a measured Intelligence Quotient (IQ) between approximately 50 and 70. To be diagnosed as educable mentally retarded, the individual must also demonstrate adaptive behavior that is consistent with the measured IQ (Gold, 1983).

5. Education Research Information Center (ERIC). The official clearing house for vocational and technical education (Calhoun & Finch, 1982).

6. Incumbent Worker Survey. Survey tool which is used in the verification process to determine if a revised information list accurately reflects local business and industrial practices and to determine the degree to which the occupation involved differs within the community being served (Adamsky, 1981).

7. Intelligence Quotient (IQ). The score on an intelligence test which is computed by dividing the subject's mental age (MA) by his chronological age (CA) and then multiplying by 100 (Gold, 1983).

8. Inclusion. A term similar to mainstreaming, but which specifically refers to integration of students with disabilities into regular academic classes with non-disabled peers. (Kochhar & West, 1996).

9. Instruction. The planned interactions between teacher and students that result in desirable learning (Finch & Crunkilton, 1993).

10. Job Competencies. Represents the skills required for students to perform on the job. When students meet these criteria in the classroom they can be comfortable with the knowledge that they have acquired employability skills (Lanza, 1991).

11. Learning disabled (LD). Children who exhibit a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language which manifests itself in an imperfect ability to learn, think, speak, read, write, spell or do arithmetic. The term includes conditions such as perceptual handicaps, brain injury, neurological impairment, dyslexia, minimal brain dysfunction and developmental aphasia. The term does not include children whose learning problems are due primarily to visual, hearing or motor handicaps, mental retardation, emotional disturbance, or environmental, cultural or economic disadvantage (Gold, 1983).

12. Least restrictive environment (LRE). A principle embodied in early special education law (P.L. 94-142), which required that students be educated in settings that were least restrictive of their freedom and most supportive of interaction with non-disabled peers (Kochhar & West, 1996).

13. Mild retardation. A classification used by the American Association on Mental Retardation (AAMD) to define an individual whose IQ is roughly between 55 and 68 and who is capable of learning basic academic subjects (Gold, 1983).

14. Mainstreaming. A term based on the least restrictive environment principle, which represented effort to structure school programs to permit students with disabilities to be served to the extent possible in their home schools and in classrooms with their non-disabled peers (Kochhar & West, 1996).

15. Moderate retardation. A classification used by the American Association on Mental Retardation (AAMD) to define an individual whose IQ is roughly between 40 and 55 and who can usually learn functional academics and vocational skills (Gold, 1983).

16. Task. An activity or series of activities, often spread over a number of days and often integrated across a number of disciplines (New Directions, 1995).

17. Trainable mentally handicapped (TMH). A term used by educators to refer to individuals who have a measured IQ between approximately 25 and 50. To be diagnosed as trainable mentally retarded, the individual must also demonstrate adaptive behavior that is consistent with the measured IQ (Gold, 1983).

18. Vocational Education. In 1976 the United States Congress defined vocational education as "organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree." (Calhoun & Finch, 1982).

Chapter 2

Review of Literature

Introduction

In order to develop a vocational high school curriculum for special needs students enrolled in Culinary Arts program, this chapter presents a review of that body of literature relating to the following topics: (a) role of vocational education, (b) community needs, (c) models of programs, (d) motivational approaches, (e) special needs, (f) developing vocational curricula, and (g) research and development as an accepted research methodology.

The review of the literature as it relates to the development of a Culinary Arts curriculum for high school special needs students focused on computer searches of ERIC resources, educational research journals, periodicals, and dissertation abstracts.

Role of Vocational Education

Calhoun and Finch (1982) believed that there is a general agreement among educators that the objectives of career and vocational education are: (a) to allow all students to relate their education to the world of work, (b) to provide an opportunity to engage in occupational exploration, including work experience, specialized instruction, and career decision-making, leading toward a preferred life style and career pattern, and (c) to provide automatic exit and reentry to the educational system or the labor force as needed.

Finch and Crunkilton (1993) stated that superimposed on the formal elements of education are two categories that reflect the broad goals associated with it. These two types of education may be referred to as education for life and education for earning a living. It was further cited by Finch and Crunkilton (1993) that the Vocational Education Acts of 1963 and 1968, and their subsequent Amendments, as well as the Perkins Act of 1990, were based on preparing youth and adults for placement in entry level jobs.

Finch and Crunkilton (1993) stated that in a study conducted by the American Society for Training and Development (ASTD), seven workplace basics are needed for success in today's and tomorrow's workplace. They stated that these basics included:

1. Organizational Effectiveness/Leadership.
2. Interpersonal/Negotiation/Teamwork.
3. Self-Esteem/Goal Setting - Motivation/Personal and Career Development.
4. Creative Thinking/Problem Solving.
5. Communications: Listening and Oral Communications.
6. 3Rs (Reading, Writing, Computation)
7. Learning to Learn.

Wosner and Stone (1991) stated that it may be that most levels of educational systems are failing to recognize the real needs of their students in relation to the remainder of their lives. With the quickening pace of technological change, large and progressive corporations are increasingly seeking applicants with the ability to learn and change with the times, individuals who have strong basic academic skills, a willingness to work hard, and a capacity to think.

Community Needs

According to Darrell J. Minott, Delaware's Secretary of Labor (1995), Delaware's economy is one of the nation's strongest. He stated that in 1994 Delaware's unemployment rate was 4.9 percent, one of the lowest in the region and 13th lowest in the nation. Minott (1995) also stated that Delaware had an unemployment rate average of 4.0 percent for the first half of 1995. He projected a net increase in Delaware of 69,200 jobs during the period of 1993-2005. Delaware Tomorrow (1995) stated that Eating and Drinking places will generate the largest net increase in jobs (6,339) for the period 1993-2005. This is due to the increased availability of income during this period plus the time pressures of two-wage-earner families. Delaware Tomorrow (1993) provided projected statistics for Delaware occupations with the most annual openings for 1993-2005. Projected food service jobs within these most annual openings include:

1. In the category of waiters and waitresses, there were 6,030 positions in 1993. In the year 2005 it is projected that there will be 8,129 positions, an increase of 433 positions.

2. In the category of cashiers, there were 7,373 jobs in 1993. In the year 2005 it is projected that there will be 8,882 positions, an increase of 385 positions.

3. In the category of food preparation workers, there were 2,871 positions in the year 1993. In the year 2005 the projection is for 3,841 positions, an increase of 158 positions.

4. In the category of food preparation service, fast food, for the year 1993 there were 3,742 positions. By the year 2005 there will be 4,398 positions, an increase of 156 positions.

5. And in the category of dining room and bartender helpers, in 1993 there were 1,898 jobs. In the year 2005 it is anticipated that there will be 2,293 positions, an increase of 115 positions. These statistics provide a projected total increase of 1247 positions in the Food Service Occupations in Delaware for the period 1993 to 2005.

According to the Division of Vocational Rehabilitation of the Department of Labor, 592 clients with disabilities were placed in Delaware in 1994. Of this total, 193 or 32.6 percent of placements were in the category of Service Occupations. There were no available statistics breaking this broad category down into components including food service occupations.

The Dictionary of Occupational Titles (DOT)(1991) which is compiled by the United States Department of Labor, is a list of over 22,000 occupations in which people are employed. Some of the occupations listed in the DOT require extensive preparations and training, others require little or no training. These are often the entry level occupations. Job titles in the food service industry requiring little or no training are cafeteria attendant, counter attendant, dining room attendant, runner, clean-up helper, counter dish carrier, dish carrier, glass washer and carrier, room service assistant, steamtable worker, table setter, water server, coffee maker, baker helper, cook helper, kitchen helper, counter-supply worker, dish machine operator, pots and pan washer, and kitchen sanitation worker.

These job titles listed in the DOT may provide abundant job opportunities for employment for the special needs population. Under the section of Job Outlook, the author states:

> Job opening for chefs, cooks, and other kitchen workers are expected to be excellent through the year 2005. Growth in demand for these

> workers will create many new jobs, but most openings will arise from the need to replace the relatively high proportion of workers who leave this very large occupation each year. There is substantial turnover in many of these jobs because of their limited requirement for formal education and training allow easy entry, and the many part-time positions are attractive to persons seeking a short-term source of income rather than a career. Many of the workers who leave these jobs transfer to other occupations, while others stop working to assume household responsibilities or to attend school full time.(Occupational Outlook Handbook, 1994-1995, p. 305)

Models of Programs

In addition to computer and library research for other models, the researcher had conversations with knowledgeable educators which led to contact with two institutions which were supposed to have Culinary Arts Food training programs for the special needs population.

The researcher made repeated calls to the Randolf Skills Center in Philadelphia, Pennsylvania; however no information was obtained from this source. An entire day was spent visiting and observing the Special Needs training program at the Southeast Pennsylvania Rehabilitation Center in Elwyn, Pennsylvania. While the visit provided several program operational ideas, Elwyn did not have a functional written curriculum or curriculum model from which information could be extracted.

Very often it is thought that to create quality programs it was necessary for school systems to expend large sums of money. It was demonstrated by the Culinary Arts program entitled Careers through Culinary Arts Programs (C-CAP) established in the

New York school system in 1990 that this is not the case. According to Kongshem (1993), the C-CAP program was established with little or no local school district financial involvement other than providing classroom space and teachers. Generous donations of kitchen equipment, supplies, and food products from manufacturers and food corporations, as well as scholarships from post secondary culinary schools helped the school district start up new programs without incurring significant financial burdens. In addition, local master chefs provided expertise and guidance as chefs-in-residence and judges for local food contest scholarship contests.

Motivational Approaches

Lingstrom (1984) stated that the most crucial factors in learning are the strength of motivation, appropriateness of the learning resources to learning tasks, and the climate of learning environments. He also included the motivation of the teacher and his/her ability to motivate students. Lingstrom (1984) stated that the classroom environment is of critical value when establishing a curriculum. This author stated further that creating the educational environment requires an understanding that (a) environmental factors influence learning, (b) not everyone learns in the same way, and (c) learning is ultimately self-directed, an individual matter, and occurs best when individuals are self-motivated.

According to Kongshem (1993) all students need different types of motivation. Successful programs are established which provide built-in motivational instruments and/or strategies. Often the motivation of the students may determine the success of the programs. To measure the effectiveness of programs and the growth of its students, some programs use scholarship awards as motivational instruments. The quantity and quality of these scholarships can be used as one tool to measure program success (Kongshem, 1993). This author further stated scholarship awarding programs and a high rate of

student placement in the community are what generates excitement within the school system but more importantly within the community.

Special Needs

Clark and Kolstoe (1995) believe that persons handicapped by some significant disability not only need the opportunity to pursue the development of behaviors, skills, abilities, and attitudes that will allow them equal access to the adult world but they also merit special considerations along the way to circumvent, ameliorate, or eliminate the disability. They stated:

> In spite of outstanding contributions to society and the more modest contributions of thousands of other people with disabilities who work, pay taxes, contribute to the nation's gross national product, and otherwise enrich society, there remains a substantial segment of the populations that is ignorant of or unable or unwilling to acknowledge the value of people with disabilities (p 154).

Grossman (1983) stated that mental retardation refers to significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period. He defines the developmental period as that time between birth and eighteen years of age. Grossman (1983) stated that the adaptive behavior was the effectiveness or degree with which individuals meet the standards of personal independence and social responsibility expected for that age and cultural group.

Kirk and Gallagher (1989) state that no definition, no matter how comprehensive, is worth much unless we can translate its abstractions into some form of concrete action. Intellectual subnormality has traditionally been determined by performance on intelligence tests. These authors state further that IQ scores can be used as a rough indicator of level

of retardation, and suggest the following ranges: Mild retardation is an IQ score between 50-55 and 70. A moderate retardation level is an IQ score of 35-40 and 50-55. The severe and profound level of retardation is an IQ score below 35.

Kirk and Gallagher (1989) stated that children with mild retardation will have school expectations in which they have difficulty in usual school programs and that they need special adaptations for appropriate education. They also felt that a child who is mildly retarded because of delayed mental development has the capacity to develop in three areas: academically (at the primary and advanced elementary grade levels), socially (to the point at which the child can eventually live independently in the community), and vocationally (to be partially or totally self-supporting as an adult). They further state that the adult expectations of these children are that they can make productive adjustment at an unskilled or semi-skilled level.

According to Kirk and Gallagher (1989), the child who is moderately retarded can achieve some degree of social responsibility, learn basic academic skills, and acquire limited vocational skills. Children with moderate retardation need major adaptations in educational programs. The programs should focus on self-care or social skills, and the student should learn basic academic and vocational skills. Adult expectations for moderately retarded students are that they can make social and economic adaptations in a sheltered workshop or in a routine job under supervision.

To regard people with disabilities as a potentially valuable resource requires a commitment of faith and a recognition that potential must be discovered, nurtured, and developed. It requires a willingness to invest time, effort, patience, and support until a satisfactory level of work and personal living skills can be achieved. To be certain that each student with a disability has a chance to discover his or her potential, faith must be

backed up by educational programs that are realistically crafted to allow students to pursue options to reach their goals (Clark & Kolstoe, 1995).

The William T. Grant Foundation (1988) reported "Learning takes place when (a) learners regard what they need to know as relevant to their lives; (b) they feel that their teachers are committed to their success; and (c) institutional environments allow for differences in learning methods and styles and are in harmony with the diverse needs and interests of the learners" (p 45).

This report further stated that the public and private sector should give continuing attentions to cooperative education, internship, and apprenticeship. The report suggests an emphasis on monitored work experience, usually for pay, while the student is still enrolled in school. Internship, an even less used approach, exposes students to careers and work on an unpaid, part time, or short-time basis. Apprenticeship, which is far more comprehensive, is a substantially underused strategy in America, where until recently it tended to be union directed.

The William T. Grant Foundations Report (1988) found that through real-life work experiences in the vocational school, the high school special needs student can begin to feel more confident about himself or herself. The student can feel tolerant toward others by developing skills required for coping with real life. Specialized programs can provide students with esteem-building experiences to enable them to act as independent, contributing citizens for the remainder of their lives.

Kirk and Gallagher (1989) state that in recent years the educational community has been placing strong emphasis on the least restrictive environment and mainstreaming has brought many retarded children in closer contact with their non-handicapped peers. They

state that major types of placements for these students have augmented the regular classroom, the resource room, and the special class.

Curriculum Issues

The vocational education curriculum needs to be specific to the requirements of the trade area involved and the skills required to master the trade. Hoerr (1994) stated that schools are typically organized around linguistic and logical-mathematical based curriculums. He stated that we should design curriculum which would enable our students to learn using all of their talents. Curriculum should be designed and lessons implemented which provide a variety of methods of instruction. Using multiple intelligence teaching techniques enables teachers to relate their instruction to a multitude of students.

Esler and Esler (1989) stated that the most commonly found approach in mainstreaming special education students is the content approach, in which textbooks are used as the primary instrument for curriculum presentation. Verbal instruction is the primary presentation method used. Students usually are expected to listen to the teacher presentation, engage in discussion, read, study, and complete written assignments. Typically students are evaluated by written tests that reflect recall of verbal presentation material. Although this may be an appropriate approach for higher level special education students, these researchers questioned its use with lower levels of learners.

Kochhar and West (1995) stated that past instructional methods and curriculum innovations have been found to be particularly effective for special needs populations are those that integrate academic and vocational skills development and apply them to real-world work environments.

Scruggs and Mastropieri (1992) noted in their study that many factors other than curriculum interact with characteristics of students with special needs. They further

reported the level of teacher enthusiasm resulted in substantial differences in student's learning and behavior even when the same curriculum was being used.

Kirk and Gallagher (1989) recommend four areas of instruction which make up most programs for mildly and moderately retarded children. The first area is readiness and academic skills, usually with preschoolers and elementary school children, where basic reading and arithmetic skills are stressed. Later these skills are applied to practical work and community settings. The second area is communication and language development emphasizing practice in using language to communicate needs and ideas. Specific efforts are directed to improve memory skills and problem-solving skills at the level of the student's ability. The third area is socialization where specific instruction in self-care and family living skills, beginning at the preschool level with sharing and manners, gradually develop in secondary school into subjects like grooming, dancing, sex education, and drug abuse prevention. The last area of instruction presented by Kirk and Gallagher (1989) is prevocational and vocational skills which establishes the basis for vocational adjustment through good work habits such as promptness, following through on instruction, and working cooperatively on group projects. At the secondary level, this curriculum stream can focus on career education and include part-time job placement and field trips to possible job sites.

Kirk and Gallagher (1989) stated that when developing teaching strategies a major educational objective is to help mildly and moderately retarded children develop socially constructive skills and behaviors and to reduce the behaviors that impede learning and social acceptance. They offer several recommendations to achieve this goal:

1. A career preparation profile with emphasis on these three areas: type of program, curriculum emphasis, and participation disciplines.

2. For chronological age 12-15, prevocational classes with curriculum emphasis on career awareness, activities of daily living, social skills, work habits, and academics and participating disciplines in special education and vocational education.

3. For chronological age 15-18, vocational training with curriculum emphasis on related academics, skill training, social skills, work habits, and activities of daily living with participating disciplines in special education, vocational education, and vocational rehabilitation.

4. For chronological ages of 13-19, competitive employment training with curriculum emphasis on core tasks, on the job training, social skills, activities of daily living, and work habits with participating disciplines in special education, vocational education and vocational rehabilitation.

5. For the chronological age group of 17 to adult, sheltered facility and competitive employment with support as needed in curriculum emphasis and vocational rehabilitation as the participating discipline (special education and vocational education for students ages 17-21).

Villa and Thousand (1995) assert the theory of multiple intelligence which was proposed by Howard Gardner in 1983 and question the adequacy and efficacy of the traditional concept of knowledge, aptitude, and intellect. The multiple intelligence theory is based on the assumption that there are several different forms of intelligence that co-exist to create a pattern of ability for any one individual.

According to Armstrong (1994), several steps should be used when considering curriculum and writing lesson plans. He stated several questions should be asked regarding the multiple intelligence approach. These questions which encompass the multiple intelligence approach include:

1. How can I use the spoken or written word? (Linguistic)

2. How can I bring in number calculations, logic, classification or critical thinking? (Logical-Mathematical)

3. How can I use visual aids, color, art or visual organizers? (Spatial)

4. How can I incorporate music, sound or set key points to rhythm or melody? (Musical)

5. How can I involve the whole body or "hands on"? (Body-Kinesthetic)

6. How can I involve students in peer or cross age sharing, cooperative learning or large group simulations? (Interpersonal)

7. How can I evoke personal feelings or emotions or give students choices? (Interpersonal)(p 26-28).

Armstrong (1994) stated that by using the multiple intelligence model almost any subject could be adapted to provide an approach which would fit the learning style of most students. He further stated that this model helps insure the success of students instead of building in failure.

Developing Vocational Curriculum

The DACUM (Developing A CurriculUM) is an approach to curriculum development. According to Finch and Crunkilton (1993), the DACUM relies on experts employed in the occupational area to determine curriculum content and allows them to be guided through a systematic content determination process. Finch and Crunkilton (1993) describe DACUM as a single sheet skill profile that serves as both a curriculum plan and evaluation instrument for occupational training programs. DACUM procedures include:

1. Reviewing a written description of the specific occupation.

2. Identifying general areas of competence within the occupation.

3. Identifying specific skills or behaviors for each general area of competence.

4. Structuring the skills into a meaningful learning sequence.

5. Establishing levels of competence for each skill as relates to realistic work situations. (Finch & Crunkilton, 1993)

Clark and Kilstoe (1995) describe the Experience-Based Career Education (EBCE) Model for students with special needs. This model provides students with the opportunity to explore possible jobs while still enrolled in school. The students are given the opportunity to explore four different job sites while still taking their prescribed academic subjects. Clark and Kilstoe (1995) believe that one major criticism of the experience-based program is that the students learn only what they experience on those jobs to which they were exposed.

Another model which Clark and Kilstoe (1995) describe was the School-Based Comprehensive Career Education Model. This model was sponsored by the U.S. Department of Education with the Center for Vocational and Technical Education at Ohio State University. Although this model was not developed specifically for special needs students, the elements allowed for the inclusion of people with disabilities. But with the reduction in federal funds for programs from the U.S. government in the 1980's, the model became largely a token attempt at reform rather than being a continuing force for reform.

And finally, Adamsky (1985), delineated the steps in developing a vocational curriculum:

1. Define the scope of the program. What jobs will be available to completers of this program? Does the institution have the resources to support the program? Involve the craft advisory committee to the program in delimiting the program.

2. Examine task analyses of the occupations or conduct a task analysis. What do workers in this field do? What knowledge, skills and attitudes are necessary for success on the job? Seek input from the craft advisory committee to the program.

3. Present the task analysis to incumbent workers and their supervisors for verification, modifications, and additions or deletions.

4. Develop program objectives, a program of study, instructional task objectives, and evaluation instruments.

Adamsky (1985) stressed input from the craft advisory committee throughout the process.

Research and Development

This study combines elements of survey research and research and development methodologies. Survey research is a means of gathering specific and accurate information that will insure a valid product. Research and development is a strategy that relies on scientific development, field testing, and evaluation of the process and product. This methodology has been accepted in educational research as an effective means of contributing to the body of knowledge relating to educational activities. This study adds to that body of knowledge relating to the use of the research and development methodology for developing educational curriculum.

Summary

The review of the literature encompassed those significant areas that impact on this study. The role and expectations of vocational education were examined in the context of preparing for a global work force. An examination of the role and expectations of vocational education, the community needs based on job availability and projections for the future from the Delaware Department of Labor, models of programs, special needs,

and curriculum issues were all reviewed. The review of the literature related to curricula, programs, task lists, and competency list for secondary Culinary Arts programs designed specifically for special needs students failed to identify any specific research on Culinary Arts programs for special needs students.

Chapter 3

Procedures

The research design included the four major components of a research and development evaluations process (Stufflebeam, 1971). An examination of the context of the problem; that is, the lack of relevant special needs programming in the Culinary Arts area; determining the sources of input of information for the special needs problem, craft advisory committee input, and an Incumbent Worker Survey; a process of curriculum development, to include review of literature, task analysis, and analysis of data collected through the Incumbent Worker Survey; and the product, an adapted curriculum based on the process. These four interrelated components, context, input, process, and product guided the development of the Culinary Arts food preparations curriculum for special needs students.

Context of the Problem

The first component was an examination of the context of the problem. This revealed that there were sixteen special needs students enrolled in the Food Preparation program at Delcastle Technical High School, Wilmington, Delaware. Six of these students were classified as Learning Disabled, eight students were classified as Educable Mentally Handicapped and two students were classified as Trainable Mentally Handicapped. An examinations of the program of instruction for the special needs students revealed that there was no specific curriculum in place for the special needs students in

the Culinary Arts program at Delcastle Technical High School. The instruction was based on the curriculum for the regular education students in the Culinary Arts department.

Input

The second step in the procedure was determining the sources of input of information for the special needs vocational program. It was determined that the following sources of information and expertise could be drawn upon:

1. Relevant literature.
2. The Culinary Arts Curriculum for the New Castle County Vocational Technical School District.
3. The U S Department of Labor's Dictionary of Occupations Titles (1991).
4. The Craft Advisory Committee of the New Castle County Vocational Technical School District.
5. An incumbent worker survey.

Process

The third step in the procedure was the process. This step included:

1. A review of the literature in which there was a computer search of ERIC resources, educational research journals, periodicals and dissertation abstracts.
2. An investigation of the regular Culinary Arts curriculum of the New Castle County Vocational Technical School District. All curriculum items which related to the entry level occupations of the food service industry were extracted and included as a basis for the proposed special needs curriculum. (See Appendix 1)
3. An analysis of the Food Service Jobs listed in the US Department of Labor's Dictionary of Occupational Titles (1991) was conducted, during this analysis all food

service occupations which were entry level occupations were extracted and are included in Appendix 4.

4. The portions of the regular Culinary Arts curriculum which were extracted as appropriate for the proposed Special Needs Curriculum were reviewed by the New Castle County School District Craft/Advisory committee for Culinary Arts. This committee consists of 21 member. Four of the committee members are educational or special educational specialists at the district level, eight of the committee members are professional food service educators at the high school or college level, and the remaining nine committee members are professional restaurateurs (owners, managers and/or chefs).

5. Thirty restaurants in New Castle County, Delaware, were visited. During these visits the restaurant owner, manager, or assistant manager was invited to participate in the incumbent workers survey (See Appendix 2). Twenty-four of the sites agreed to participate. After agreeing to participate, the survey was explained in detail and the participants were left with the survey, an addressed and stamped envelope for mailing, and they were asked to complete the survey within one week and place it in the mail. Of the twenty-four who agreed to participate twelve responses were returned (See Appendix 3).

Product

During the meetings the committee reviewed in detail each item of the original Culinary Arts curriculum (See Appendix 5). The committee made suggestions for additions and deletions. The results of the review were unanimously approved by the committee members.

The curriculum which will be developed as part of this research project is designed to meet the needs of three categories of special needs student as identified by the special

education identification process at Delcastle Technical High School. The term Learning Disabled (LD) is generally used to describe the higher functioning special needs students, whereas the categories of Educable Mentally Handicapped (EMH) and Trainable Mentally Handicapped (TMH) will be used to designate the lower functioning special needs students.

It is the goal of the Culinary Arts food preparation program to mainstream into the Regular Culinary Arts Program all of the students (usually Learning Disabled) possible. This is initiated when the students have mastered the required number of skills on the Food Preparation Student Task List. Those students who have not mastered the required number of tasks will remain in the Food Preparation class until placed in the Cooperative Work Program during their senior year of school. This Cooperative Work Program is designed specifically for students unable to master required tasks and will be directly supervised by an adult staff member who is a trained Job Coach.

Chapter 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The Problem

Currently students with special needs who are enrolled in Food Preparations courses received instruction which is based on the curriculum for regular education students in Culinary Arts. The Dictionary of Occupational Titles (1991) lists the jobs of the food service industry which are the primary basis for the curriculum for the regular education students. There are no provisions made within those curricula for the limited learning abilities of the special needs students within the program.

This study was significant in that it addressed a need for a competency- based Food Preparation curriculum for special needs students at the high school level. Furthermore, the research and development process described by Adamsky (1985), has been determined to be an effective means of developing vocational curriculum.

Review of the Literature

The review of the literature included computer searches of ERIC resources, educational research journals and periodicals, evaluation textbooks, research textbooks, and dissertation abstracts. This review related to curricula, programs, task lists, and competency lists for secondary Culinary Arts/Food Preparation programs designed specifically for special needs students, but the review failed to identify any specific research on Culinary Arts programs for special needs students.

Purpose

The purpose of this study was to research and develop a competency-based food preparations curriculum for high school special needs students. The focus of the development of the curriculum was on entry level occupations which the special needs students could be trained for and placed in corresponding job positions in industry after successful completion of the program of study.

Methods

This study focused on the development of a competency based curriculum for special needs students enrolled in a culinary arts curriculum in food preparation. This study included a review of the literature, evaluation of the existing regular education Culinary Arts curriculum by the craft advisory committee, a review of the job descriptions from the United States government's Dictionary of Occupational Titles and the completion of incumbent workers survey by restaurant owners, managers, and/or assistant managers for duties and responsibilities of the beginning workers in the food service industry.

Data Analysis

The analysis of the results of the incumbent worker survey were tabulated using simple percentages and were presented in table form. An analysis of the data resulting from the incumbent workers' survey, which was submitted to twenty four restaurant owners, managers or assistant managers, evaluating the competencies by categories performed by beginning employees are presented in the following tables:

Table 1

Employers Ratings of Competencies by Curriculum Category

Curriculum Category	% Performed by Beginners	% Employers Stated Difficult	% Skills Very Important	% Skills Not Important
I. Fundamentals of Culinary Arts	67	4	76	7
II. Safety and Sanitation	69	6	72	15
III. Weights and Measures	30	10	27	62
IV. Tools and Equipment	32	12	25	46
V. Food Production and Prep	15	24	15	71
VI. Service Procedures and Tech.	26	9	24	58
VII. Baking	2	32	2	56

Discussion

A review of the data presented in Table 1 reveals that 67 percent of the employers surveyed stated that the Fundamentals of Culinary Arts category is performed by beginning employees, and 76 percent of these employers feel that these competencies are very important skills. The Safety and Sanitation category yielded a 69 percent rate performed by the beginning employee, with 72 percent stating this was a very important skill. The category of Safety and Sanitation was the highest recorded percentage of all categories, with 72 percent of respondents rating these skills very important. The employers stated that Category V, Food Production and Preparation and Category VII,

Baking, were the only two categories that showed any significant degree of difficulty for the beginning worker. Category III, Weights and Measures, Category V, Food Production and Preparation, Category VI, Service Procedures and Techniques, and Category VII, Baking, had percentages of 56 or greater for skills which were not important or were not applicable for the beginning employee.

Category V, Food Production, and Category VII, Baking, with percentages of 24 and 32 respectively, were the two categories which were rated as the most difficult for the beginning employee to learn. Category III, Weights and Measures, and Category V, Food Production and Preparation, were judged by employers as the two highest categories as not important or not necessary for their particular type of food service operation.

Of the seven categories in Table 1, Category I, Fundamental of Culinary Arts, and Category II, Safety and Sanitation, were the only two categories in which 67 percent or greater of the employers rated these competencies as performed by beginning workers. The employers thought that these were very important skills for the worker (72 percent or more).

The respondents stated that beginning employees were involved in Baking only 2 percent of the time and only 2 percent felt this skill was very important. This resulted in 56 percent stating it was not important or not applicable for their restaurant.

Full service restaurants are those restaurants which offer a menu which contains all of the following items (appetizers, soups, salads, entrees, vegetables, beverages, and desserts) as well as full dining room service by waiters and/or waitresses. The results of the survey completed by owners, managers, and/or assistant managers of full service restaurants are presented in Table 2.

Table 2

Full Service Restaurant Managerial Ratings of Competencies by Curriculum Category

Curriculum Category	% Performed by Beginners	% Employers Stated Difficult	% Skills Very Important	% Skills Not Important
I. Fundamentals of Culinary Arts	72	3	78	6
II. Safety and Sanitation	68	5	71	18
III. Weights and Measures	34	9	26	48
IV. Tools and Equipment	39	18	28	27
V. Food Production and Prep	25	26	19	62
VI. Service Procedures and Tech.	46	11	32	17
VII. Baking	4	28	2	50

Discussion

An evaluation of the data presented in Table 2 reveals 72 percent of the employers surveyed, who were owners, managers, or assistant managers in full service restaurants, stated that the Fundamentals of Culinary Arts category were performed by the beginning employees in their restaurants, but only three percent felt these same skills were difficult to learn. Seventy eight percent, the highest percentage in Table 2, determined that these same skills were very important for the beginning employee to know. The managerial group listed a 71 percent rating as very important for Safety and Sanitation, since 68 percent of these beginning employees performed the skills in this category.

In the Weights and Measures category, close to one third (34 percent) of the employers evaluated these skill as those to be performed by beginning employees but almost half (48 percent) stated that these skill were not important or not necessary to be performed by beginning employees for their particular food service operation. Of the seven categories evaluated, Tools and Equipment yielded the closest comparison percentage ratings of the skills performed by the beginning worker. Full service respondents stated that these skills were difficult to learn and were very important, but these skills were not important or applicable to the beginning employees in their food service business.

The Food Production and Preparation category earned the second lowest rating in the percentage of those performed by the beginning employees and the second highest rating in the category of the percentage of employers who thought this skill difficult to learn. The Food Production and Preparation category was also determined to be the one which contained the skills which had the highest percentage (62 percent) of items not important or applicable for the beginning employee for that type of employer.

Full service restaurants are the primary employers of bus people in the dining room; 46 percent of employers surveyed indicated Category VI competencies were performed by beginning employees and 32 percent indicated these skills were very important. This category likewise yielded the second lowest rating as skills which were not important or not applicable for the beginning employees for this category of restaurants. Baking skills were rated as the category which was not important (50 percent) and extremely unimportant for the beginning worker with a rate of 2 percent.

Fast food and limited menu restaurants are those restaurants with specialty or limited menus, such as hamburgers (e.g., McDonald's, Burger King, and Wendy's) and/or

have limited service. Limited service restaurants are normally characterized with service in which the customers go the service counter, order their food and take the food to the table themselves. There are normally no waiters, waitresses, or bus persons in limited service restaurants. Utility workers may clean tables and sweep floors but there is no one assigned to the eating area for service to the customers. The competencies and skills performed by entry level employees are rated by the owners, manager or assistant managers of limited menu restaurants in Table 3.

Table 3

Fast Food and Limited Menu Restaurant Managerial Ratings of Competencies by Curriculum Category

Curriculum Category	% Performed by Beginners	% Employers Stated Difficult	% Skills Very Important	% Skills Not Important
I. Fundamentals of Culinary Arts	59	4	78	8
II. Safety and Sanitation	70	7	73	11
III. Weights and Measures	26	11	28	76
IV. Tools and Equipment	26	7	22	65
V. Food Production and Prep	9	22	11	80
VI. Service Procedures and Tech.	4	7	16	85
VII. Baking	1	36	2	62

Discussion

When the management personnel of fast food and limited menu restaurants rated the skills performed by the beginning employee they rated Safety and Sanitation as the most significant category with a rating of 70 percent. The next highest category rating for skills performed by beginning employees was in the category of Fundamentals of Culinary Arts with a percentage of 59. Only approximately one quarter of the managerial evaluators rated Weights and Measures and Tools and Equipment as skills performed by their beginning employees. Because of the nature of fast food and limited restaurants, less than ten percent of the managers listed skills in the categories of Food Production and Preparation, Service Procedures and Techniques, and Baking as being performed by beginning employees. When asked to determine the level of difficulty of tasks for the beginning worker, the employers in fast food and limited menu restaurants stated that 22 percent in the Food Production and Preparation category and 36 percent in the Baking category were difficult. The remaining categories were rated at 11 percent or less.

Seventy-eight percent of the owners, managers, or assistant managers of fast food or limited menu restaurants rated Fundamentals of Culinary Arts as skills which were very important for the beginning employee. Seventy-three percent of the managerial personnel rated Safety and Sanitation as a very important skill for the beginning employee to know.

More than sixty percent of the managerial personnel felt that Baking (62 percent), Tools and Equipment (65 percent), Weights and Measures (76 percent), Food Production and Preparation (80 percent) and Service Procedures and Techniques (85 percent), were skills that were not important or applicable for their classification of restaurants for beginning employees.

Findings

The findings of this study, based on the evaluations of data collected and analyzed from the incumbent workers survey, research of the literature, input from the craft advisory committee, and extracts from the Dictionary of Occupational Titles, were:

1. The information in the Dictionary of Occupational Titles provided generalized job descriptions with duties and responsibilities for entry level food service occupations. The Craft/Advisory committee recommended the jobs listed in the DOT (See Appendix 4) be consolidated into six job titles, as these titles were more commonly used in New Castle County, Delaware. These titles were Busperson, Cook's Helper, Food Prep person, Pot and Pan person, Dishmachine operator, and General Sanitation/Custodial worker.

2. The review of the literature, especially the ERIC searches, did yield high school Culinary Arts training programs for regular education students which were similar to those of the New Castle County School District's Culinary Arts curriculum, but the search did not reveal any curriculum which were designed to provide training and instruction for special needs students. Nor was there any evidence of any regular Culinary Arts curriculums which had been modified or changed for the special needs populations. This deficiency in curriculum for special needs students in Culinary Arts suggests a strong need for additional research in this area..

3. The incumbent worker survey which was completed by owners, managers, and/or assistant managers in the food service industry, revealed the necessity for a complete revision of the regular culinary arts curriculum to reflect specifically the skills and tasks needed by entry level employees, and the elimination of the more advanced skills.

4. The incumbent workers survey suggested the reduction and/or elimination of the majority of curriculum items which required reading, writing skills, and math skills as primary teaching tools This was especially evident when those surveyed recommended the elimination of reading recipes, following recipes in production, and increasing and decreasing recipe sizes.

Conclusions

The evidence and information collected in this study led to the following conclusions:

1. The curriculum developed as a result of this study will be effective in providing appropriate skill development for students enrolled in a food preparations program for special needs students at Delcastle Technical High School. The projected success would indicate that the research and development methodology can be used to develop vocational educational special needs processes.

2. The curriculum which was developed in this study is worthwhile in that it addresses a local, state, and national need for a curriculum for a food preparation program for high school special needs students.

3. This study adds to the body of knowledge relating to the development of a Culinary Arts curriculum for high school special need students. This curriculum development model was approved by the Culinary Arts Craft Committee and has potential for replication by educational programs with similar instructional needs.

The implementation of a curriculum is equally as important as curriculum planning and development. It is during the implementations process that curricula, instruction and materials are actually applied in the educational setting.

Recommendations

This study provides a curriculum for a high school program in food preparation which is structured for the special needs population. Even though this development effort was successful, there are some items which need to be considered in the future. The following recommendations are offered:

1. The implementation of the curriculum developed in this study should be carried out as a field test for one school year. Toward the end of that period, the results of the instruction should be considered in light of the newly created Culinary Arts food preparation curriculum as compared to the original Culinary Arts curriculum. Data should be collected to determine if there has been considerable increase in the proficiency of the special needs students in those areas of entry level jobs in the food service industry which are now concentrated in the new curriculum.

2. The curriculum which was developed in this study can be used in other vocational programs in comparable settings.

3. Those considering replicating this curriculum should insure that there are appropriate facilities to include a complete commercial kitchen and dining room available for the implementation of this curriculum. If special needs students are to be trained in the entry level positions in the food service industry, it is recommended that a commercial type of restaurant training facility be available for the practical portions of the training.

4. When future revisions are made to this curriculum, the curriculum should be based on a specific entry level job and its related skills. Jobs could be prioritized based on their difficulty to learn and be sequential as they are related to moving to more advanced and difficult positions.

5. Specific job and task information, which resulted from this study, could be used as training and instructional guides for both special needs and regular education students.

6. A future research study could be conducted using a larger sample size. This study would be a comparative study between the contents of the regular education curriculum (See Appendix 5) and the new special education food preparation curriculum (See Appendix 1).

7. Further research studies should be considered which would utilize and measure specific instructional methodology, contemporary educational facilities, counseling and guidance services, and appropriate sampling techniques.

APPENDIX

1

Curriculum Guide for

Culinary Arts

Food Preparation

for Special Needs Students

Goals

1. **To provide the special needs student with a strong knowledge of the basics of the food service industry which will enable him/her to be mainstreamed into the regular Culinary Arts Program.**

2. **To prepare the special needs student for gainful employment in the food service industry in an entry level position including but not limited to:**

Busperson
Cook's helper
Food Prep person
Pot and Pan person
Dishmachine Operator
General Sanitation/Custodial worker

Curriculum Guide for Culinary Arts Food Preparation

I. Fundamentals of Culinary Arts

UNIT OBJECTIVES: After completing this unit, the special needs student should be familiar with the different parts of a restaurant, general culinary terms, techniques for applying for employment and general nutrition information.

SPECIFIC OBJECTIVES:

1. Differentiate between "Front of the House" and "Back of the House".
2. List five jobs in the "Front of the House".
3. List five jobs in the "Back of the House".
4. Define 12 Culinary terms.
5. Define the importance of good job attendance.
6. Complete a job interview.
7. Complete a job application form.
8. Demonstrate effective telephone techniques.
9. Complete a job resume.
10. Identify the food pyramid categories.
11. Obtain a Co-op job.
12. Complete a Senior project.

II. Safety and Sanitation

UNIT OBJECTIVES: After completing this unit, the special needs student should be familiar with safety and sanitation practices to prevent accidents, food contamination, and food-borne illnesses.

SPECIFIC OBJECTIVES:

1. Complete a Right-to-Know test with 100% accuracy.
2. Demonstrate use of shop rules.
3. Point out location of fire extinguisher and know kitchen/school evacuation procedures.
4. Classify the types of fires.
5. Identify sources of kitchen pests and possible preventative actions.
6. Describe orally procedures for emergency situations.
7. Demonstrate and practice proper hand washing procedures.
8. Demonstrate and practice proper grooming and wardrobe.
9. Clean floors, counters, walls, and windows.

10. Clean and sanitize kitchen blocks and cutting boards.
11. Demonstrate how to setup a three compartment kitchen sink.
12. Demonstrate washing, rinsing, and sanitizing pots and pans.
13. Handle silverware, glasses, dishes properly.
14. Operate a dish machine to clean dishes, silverware and pots and pans.
15. Demonstrate how to set-up and break-down/clean a dish machine.
16. List, in order, temperature requirements for safe food handling, danger zone, refrigeration, and freezing.
17. Identify at least 4 food-borne diseases.

III. Weights and Measures

UNIT OBJECTIVES: After completing this unit, the special needs student should be familiar with both dry weighing and liquid measuring techniques used in commercial kitchens.

SPECIFIC OBJECTIVES:

1. Identify Spring and Balance Beam scales.
2. Identify all liquid measuring containers (Cups, Pints, Quarts, Half Gallons, and Gallons).
3. Demonstrate understanding of fractions (1/4, 1/3, 1/2, 2/3, and 3/4) when using scales and liquid measures.
4. Accurately weigh items using Spring Scales and Balance Beam Scales.
5. Accurately measure liquid ingredients.
6. Portion food according to specifications.
7. Convert recipes to larger or smaller yields.

IV. Tools and Equipment

UNIT OBJECTIVES: After completing this unit, the special needs student should be able to select the proper hand tools and utensils for the desired use and to use hand tools and utensils properly.

SPECIFIC OBJECTIVES:

1. Identify a minimum of 25 different types of large kitchen equipment.
2. Identify a minimum of 50 knives, pots, pans, and kitchen utensils.
3. Demonstrate the correct and safe use and cleaning of hand tools and utensils.

4 Identify the parts of a French knife.
5. Demonstrate and practice proper passing of a French knife.
6. Demonstrate safe use and cleaning of a table mixer.
7. Demonstrate safe use and cleaning of a food warmer.
8. Demonstrate safe use and cleaning of a conventional oven.
9. Demonstrate safe use and cleaning of a range.
10. Demonstrate safe use and cleaning of a grill.
11. Demonstrate safe use and cleaning of a steamer.
12. Demonstrate safe use and cleaning of a garbage disposal.
13. Demonstrate safe use and cleaning of a slicing machine.
14. Demonstrate safe use and cleaning of a food processor.
15. Demonstrate safe use and cleaning of a buffalo chopper.
16. Demonstrate safe use and cleaning of a deep fat fryer.
17. Demonstrate and practice sharpening knives on a stone.
18. Demonstrate and practice using a steel to put an edge on a knife.

V. Food Production and Preparation

UNIT OBJECTIVES: After completing this unit, the special needs student should be able to perform the majority of the duties and responsibilities of the basic food preparation person in a commercial kitchen.

SPECIFIC OBJECTIVES:

1. Identify 20 different fruits and vegetables.
2. Clean and trim fruits and vegetables.
3. Demonstrate how to properly pare vegetables using a vegetable peeler.
4. Demonstrate proficiency in the proper use of a French knife.
5. Demonstrate proficiency in cutting small, medium, and large dice of onions, celery, carrots, and potatoes using a French knife.
6. Demonstrate proficiency in cutting small, medium, and large julienne cuts of onions, celery, carrots, and potatoes using a French knife.
7. Prepare a mirepoix for stock or soup.
6. Arrange and maintain dry storage area using First In First Out (FIFO).
8. Arrange and maintain refrigerated area using FIFO.
9. Differentiate between spices and Herbs.
10. Identify by sight/smell/taste 15 different spices and/or Herbs.
11. Grate cheese.
12. Prepare lemon wedges (8 per lemon).
13. Separate whites and yolks of fresh eggs.

14. Differentiate between breakfast, lunch, and dinner menu items.
15. Set up a standard breading station.
16. Using a standard breading station, prepare items for deep fat frying.
17. Prepare, plate and garnish three different cold sandwiches.
18. Prepare, plate and garnish three different hot sandwiches.
19. Using a slicing machine, slice cheese, cold cuts, onions, and tomatoes.
20. Using a slicing machine, shred lettuce and cabbage.
21. Disassemble and clean a slicing machine.
22. Using a standard recipe, prepare a basic tossed salad.
23. Using a standard recipe, prepare a basic Cole slaw.

VI. Service Procedures and Techniques

UNIT OBJECTIVES: After completing this unit, the special needs student should be able to perform the majority of the duties and responsibilities of the dining room attendant, server, host/hostess, and cashier in a full service restaurant.

SPECIFIC OBJECTIVES:

DINING ROOM ATTENDANT

1. Write or describe orally the duties and responsibilities for dining room attendants.
2. Set a basic restaurant cover.
3. Demonstrate proficiency in cleaning and filling salt and pepper shakers.
4. Demonstrate proficiency in cleaning and filling sugar bowls and sugar packet holders.
5. Load and handle trays and bus boxes.
6. Change a table cloth.
7. Carry oval serving tray/cocktail tray with one hand (finger tips).
8. Demonstrate three different cloth napkin folds.
9. Set a basic banquet cover.
10. Demonstrate proficiency in bussing a table (clearing and resetting).

WAITER/WAITRESS

11. Write or describe orally the duties and responsibilities for waiter/waitress.
12. Differentiate between table, buffet & banquet service.
13. Give four examples for each of the following categories:
    Appetizer, Soup, Salad, Entree, Vegetable, Beverage, Dessert
14. Prepare coffee using a BUNN machine.

15. Prepare coffee using an URN machine.
16. Prepare iced tea.
17. Write and add guest checks.
18. Serve guests.

HOST/HOSTESS

19. Write or describe orally the duties and responsibilities for host/hostess.
20. Greet guests.
21. Seat guests.
22. Complete seating and table chart.

CASHIER

23. Write or describe orally the duties and responsibilities for cashier.
24. Demonstrate proficiency in counting money.
25. Demonstrate proficiency in operating an electronic cash register.
26. Demonstrate proficiency in counting change to a customer.

VII. Baking

UNIT OBJECTIVES: After completing this unit, the special needs student should be able to perform the majority of the duties and responsibilities of the baker's helper in a commercial bakery or restaurant kitchen.

SPECIFIC OBJECTIVES:

1. Grease and flour cake pans.
2. Pan up/scoop cookies onto sheet pans.
3. Fill muffin tins.
4. Weigh dry ingredients using balance beam scale.
5. Measure liquid ingredients.

Curriculum References and Resources Materials

I. Fundamentals of Culinary Arts

Books and Texts

1.	Professional Chef	Leroi A. Folsom	1974
2.	Food Preparation	Robert G. Haines	1973
3.	Introduction to the Hosp Industry	Nathan Kalt	1971
4.	Culinary Nutrition	Carol A. Hodges	1989
5.	Teaching Nutrition	Mattie Pattison	1963
6.	Food Production, Management and Service	Mid-America Vocational Consortium	1992

VCR - Training Tapes

1	Techniques of Healthy Cooking (Nutrition)	1990
2.	Techniques of Healthy Cooking (Nutrition)	1990
3.	Social Skills at Work	1993
4.	Working for a Living	1993
5.	Human Relations Getting Along on Job	1993
6.	Swiss Hospitality Institute	1995
7.	Eating for Life: The Nutrition Pyramid	1995
8.	Culinary Institute of America	1990
9.	Food Service Industry Career Opps.	1991

Curriculum References and Resources Materials

II. Safety and Sanitation

Books and Texts

1.	Food Preparation	Robert G. Haines	1973
2.	Professional Chef	Leroi A Folsom	1967
3.	Food Borne Illness	Kelly G. Vester	1994
4.	Food Safety and Sanitation	Barbara A. Border	1979
5.	Healing Foods Cookbook	CD - ROM version	1994
6.	Food Production, Management and Service	Mid-America Vocational Consortium	1992

VCR - Training Tapes

1.	Kitchen Safety and Sanitation	1989
2.	Set-Up of Commercial Dishwasher	1989
3.	Sanitation...is not an Option (with text)	1990
4.	The Spoilers	1994
5.	The Danger Zone	1993
6.	Food Safety is No Mystery (USDA)	1988

Curriculum References and Resources Materials

III. Weights and Measures

Books and Texts

1.	Math Principles	Robert G Haines	1979
2.	Professional Chef	Leroi A. Folsom	1974
3.	Professional Cooking	John Wiley Soms	1983
4.	Profitable Food and Beverage	Joseph Brodner	1977
5.	Food Production, Management and Service	Mid-America Vocational Consortium	1992

VCR - Training Tapes

1.	Using the Balance Beam & Spring Scales	1987
2.	Measuring - Urns, Cups & Spoons	1988
3.	Portion Control - Scoops & Ladles	1988

Curriculum References and Resources Materials

IV. Tools and Equipment

Books and Texts

1.	Elementary Baking Hard Cover	William J. Sultan	1969
2.	Professional Chef	Leroi A. Folsom	1974
3.	Complete Kitchen Guide	Llian Langseth Chrisrensen	1968
4.	Food Preparation	Robert G. Haines	1973
5.	Introduction to the Hosp Industry	Nathan Kalt	1971
6.	Professional Chef	Leroi A. Folsom	1974
7.	Professional Cooking	John Wiley Soms	1983
8.	Simply Great Cooking Instruction	Carmen Sesto	1989
9.	Food Production, Management and Service	Mid-America Vocational Consortium	1992

VCR - Training Tapes

1.	Operating the Commercial Slicer	1987
2.	Five Basic Arts - French Knife	1991
3.	How to Dice & Julienne Onions	1992
4.	Knife Skills	1990
5.	Mise en Place`	1991
6.	Vegetable Cuts	1991
7.	Kitchen Utensil ID	1994

Curriculum References and Resources Materials

V. Food Production and Preparation

Books and Texts

1.	Professional Chef	Leroi A. Folsom	1974
2.	Complete Kitchen Guide	Llian Langseth Chrisrensen	1968
3.	Food Preparation	Robert G. Haines	1973
4.	Professional Cooking	John Wiley Soms	1983
5.	Profitable Food and Beverage	Joseph Brodner	1977
6.	Food Production, Management and Service	Mid-America Vocational Consortium	1992

VCR - Training Tapes

1.	Herbs and Spices	1994
2.	Garlic , Leek & Onion Series I	1993
3.	Garlic, Leek, & Onion Series II	1993
4.	Tourned Potatoes	1987
5.	Vegetable Prep	1989
6.	Cold, Open Sandwich	1986
7.	Cooking Methods Series	
8.	Salads	1989
9.	Tomato Salad Plates	1990
10	Seafood Series	1992

Curriculum References and Resources Materials

VI. Service Procedures and Techniques

Books and Texts

1.	Food Production, Management and Service	Mid-America Vocational Consortium	1992
2.	American Culinary Art	August Forster	1951
3.	Focus On Food	Beatrice T. Alsen	1974
4.	Gourmet's Basic	Louis Diat	1990
5.	Introduction to the Hosp Industry	Nathan Kalt	1971
6.	Menu Design Merchandising	Albin G. Seaberg	1971
7.	Pleasures of Tables	Florence Farncents	1989
8.	Professional Restaurant Service	Ellen Adeline Harris	1966
9.	Professional Table Service	Sylvia Meyer	1991
10.	Profitable Food and Beverage	Joseph Brodner	1977
11.	Stylish Setting	Jim Kemp	1990
12.	Terrific Parties	Naimi Black	1990

VCR - Training Tapes

1.	Food Service Excellence (Customer Service)	1986
2.	Tableside Cooking Series	1990
3.	The Art of Napkin Folding	1990
4.	Waitstaff Training Series	1994

Curriculum References and Resources Materials

VII. Baking

Books and Texts

1.	Baking Recipes	Cahners Books	1974
2.	Elementary Baking (Hard cover, with workbook) (Soft cover, with workbook)	William J. Sultan	1969
3.	Complete Kitchen Guide	Llian Langseth Chrisrensen	1968
4.	Desserts	Judi Olstein	1993
5.	Pies and Pastries Cookbook	Southern Living	1972
6.	Special Affects Cookbook	Michael E Samorek	1991
7.	Wenzel's Menu Making	Wenzel	1969

VCR - Training Tapes

1.	Serving Cakes	1988
2.	Cake Decorating	1989
3.	Puff Paste	1990

APPENDIX

2

INCUMBENT WORKER SURVEY

YOUR NAME: _____ COMPANY NAME: _____

YOUR TITLE: _____ TOTAL EMPLOYEES: _____

OCCUPATION OR JOB TITLE: _____

NO	TASK	PERFORMED BY BEGINNERS		DIFFICULT TO LEARN		HOW OFTEN IS TASK PERFORMED PER. (ANSWER ONLY ONE)			HOW IMPORTANT FOR ENTRY INTO OCCUPATION		
		YES	NO	YES	NO	DAY	WEEK	MONTH	VERY	SOME	NOT
I.	**FUNDAMENTALS OF CULINARY ARTS**										
1.	Complete job application.										
2.	Complete job interview.										
3.	Define importance of good job attendance.										
4.	Complete interview of food service employee.										
5.	Oral presentation comparing culinary operations.										
6.	Complete job resume.										
7.	Explain necessity of good public relations.										
8.	Demonstrate effective telephone skills.										
9.	Demonstrate effective communication.										
10.	Obtain employment as CO-OP.										
II.	**SAFETY AND SANITATION**										
1.	Complete Right-to-Know form.										
2.	Demonstrate knowledge of shop rules.										
3.	Demonstrate proper hand washing procedures.										
4.	Demonstrate proper grooming and wardrobe.										
5.	Clean floors, woodwork, windows and counters.										
6.	Clean and sanitize kitchen blocks and cutting boards.										
7.	Wash dishes, glasses, flatware, pots & pans by hand.										
8.	Wash dishes, glasses, flatware by machine.										
9.	Point out all fire extinguisher locations and know school evacuation procedures.										
10.	List orally procedures for emergency situations.										
11.	Handle services ware correctly.										
12.	Identify at least 4 food-borne diseases.										
13.	List in order temperature requirements for safe food handling and storage.										
14.	Identify sources of kitchen pests.										
15.	Demonstrate safe use and cleaning of dish machine.										
16.	Classify types of fires.										
17.	Perform health department inspections.										
18.	Perform dining room sanitation and safety checks.										
19.	Complete a worksheet on safety and sanitation in the dining room.										
20.	Evaluate service situations concerning spillage.										
III.	**WEIGHTS AND MEASURES**										
1.	Weigh items.										
2.	Weigh and measure staple ingredients.										
3.	Convert weights and measures.										
4.	Convert recipe to larger and smaller yields.										
5.	Portion food according to specifications.										

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NO. TASK	PERFORMED BY BEGINNERS		DIFFICULT TO LEARN		HOW OFTEN IS TASK PERFORMED PER. (ANSWER ONLY ONE)			HOW IMPORTANT FOR ENTRY INTO OCCUPATION		
	YES	NO	YES	NO	DAY	WEEK	MONTH	VERY	SOME	NOT
IV. TOOLS AND EQUIPMENT										
1. Identify hand tools & utensils.										
2. Demonstrate safe use & cleaning of hand tools and utensils.										
3. Identify equipment, slicers, ovens, mixers, etc.										
4. Demonstrate safe use and cleaning of slicing machines.										
5. Demonstrate safe use and cleaning of table mixer.										
6. Demonstrate safe use and cleaning of garbage disposal.										
7. Demonstrate safe use and cleaning of food warmer.										
8. Demonstrate safe use and cleaning of proofing box.										
9. Demonstrate safe use and cleaning of microwave oven.										
10. Demonstrate safe use and cleaning of convection oven.										
11. Demonstrate safe use and cleaning of conventional oven.										
12. Demonstrate safe use and cleaning of kitchen range.										
13. Demonstrate safe use and cleaning of floor mixers.										
14. Demonstrate safe use and cleaning of steamers.										
15. Demonstrate safe use and cleaning of deep fryer.										
16. Demonstrate safe use and cleaning of grills.										
17. Demonstrate safe use and cleaning of steam jacket kettle.										
18. Demonstrate safe use and cleaning of vegetable chopper.										
19. Demonstrate safe use and cleaning of food grinder.										
20. Demonstrate safe use and cleaning of broiler.										
21. Demonstrate safe use and cleaning of food processor.										
22. Demonstrate safe use and cleaning of vertical cutter.										
V. FOOD PRODUCTION AND PREPARATION										
1. Identify the food pyramid categories.										
2. Arrange food products in storage using FIFO system.										
3. Clean, trim, cut, and shred fruits and vegetables.										
4. Make sandwiches (hot and cold).										
5. Identify specific seasonings, spices and Herbs.										
6. Separate whites & yolks of fresh eggs.										
7. Grate cheese.										
8. Differentiate between breakfast, lunch and dinner menu										
9. Identify factors that determine food quality.										
10. Inspect incoming food for quality, freshness and weight.										
11. Make salads (mixed green, main course, gelatin, and marinade).										
12. Make dressings (emulsified and cooked).										
13. Prepare and evaluate pasta products.										
14. Prepare and evaluate rice using various methods.										
15. Prepare and evaluate potatoes using various methods.										
16. Prepare and evaluate vegetables using various methods.										
17. Differentiate between spices and Herbs.										
18. Make sauces.										
19. Make gravies.										
20. Prepare soup.										

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NO. TASK	PERFORMED BY BEGINNERS	DIFFICULT TO LEARN	HOW OFTEN IS TASK PERFORMED PER... (ANSWER ONLY ONE)	HOW IMPORTANT FOR ENTRY INTO OCCUPATION
	YES NO	YES NO	DAY WEEK MONTH	VERY SOME NOT
21 Plan a menu.				
22 Prepare a braised meat entree.				
23 Prepare meat sauce.				
24 Prepare casserole entree.				
25 Prepare breaded deep fried entree.				
26 Prepare and evaluate pork entree.				
27 Prepare and evaluate chicken entree.				
28 Prepare and roast a poultry meat.				
29 Prepare baked fish.				
30 Prepare deviled eggs.				
31 Prepare a beef and pork roast.				
32. Prepare a nutritionally sound meal for breakfast, lunch and dinner.				
33 Complete chart on food handling and storage.				
34 Complete a food requisition practice form.				
35 Make appetizers.				
36 Make hot d'oeuvres and garnishes.				
37 Prepare stocks.				
38 Identify various meat cuts.				
39 Identify various poultry meats.				
40 Identify various seafood.				
41 Cut, trim and bone meats.				
42 Cut, trim, and bone poultry.				
43 Cut, trim, and fillet fish.				
44 Peel and clean shellfish.				
45 Clean and shuck mollusk shellfish.				
46. Prepare shellfish entree.				
47 Identify main classes of cheese.				
48 Demonstrate proper handling of cheese.				
49 Identify market forms of eggs.				
50 Prepare quiches.				
51 Prepare breakfast meats items using various methods.				
52 Prepare inventory records for purchased foods.				
53 Maintain perpetual inventory.				
54 Price a menu.				
VI. SERVICE PROCEDURES TECHNIQUES				
1 Identify desired qualities of food servers.				
2. Set a complete breakfast cover.				
3 Set a complete luncheon cover.				
4 Set a complete dinner cover.				
5 Set a basic restaurant cover.				
6 Set a complete appetizer cover.				
7 Serve guests.				
8 Load and handle trays and bus boxes.				
9 Write and add guest check.				
10 Change a table cloth.				
11 Identify types of service and their operations.				
12 Differentiate between table, buffet and banquet services.				

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NO. TASK	PERFORMED BY BEGINNERS		DIFFICULT TO LEARN		HOW OFTEN IS TASK PERFORMED PER. (ANSWER ONLY ONE)			HOW IMPORTANT FOR ENTRY INTO OCCUPATION		
	YES	NO	YES	NO	DAY	WEEK	MONTH	VERY	SOME	NOT
13 Write out duties and responsibilities for waiter/waitress.										
14 Write out duties and responsibilities for host/hostess.										
15 Write out duties and responsibilities for cashier.										
16 Write out duties and responsibilities for dining room attendant.										
17 Greet and serve guests.										
18 Fold napkins by various methods.										
19 Prepare and evaluate coffee.										
20 Prepare and evaluate iced tea.										
21 Prepare and evaluate hot chocolate.										
22 Differentiate between Russian, French and American service.										
23 Set a basic banquet cover										
24 Draw a dining room organizational chart.										
25 Complete seating and table chart.										
26 Write checklist for opening and closing duties in D.R.										
27 Define terms of guest/employee relationships.										
28 Handle a guest complaint.										
29 Solve a problem concerning a special service situation.										
30 Demonstrate method of suggestive selling.										
31 Demonstrate product knowledge necessary for effective sales.										
VII. BAKING										
1. Prepare and evaluate cookies, biscuits, cornbread, muffins.										
2. Prepare and evaluate dinner rolls, breads, and sweet rolls.										
3. Prepare and evaluate cakes, custards, and pies.										
4. Ice cakes.										
5. Decorate cakes with borders and flowers.										

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APPENDIX

3

The following is the list of fast food and full service restaurants which were visited and the owner, manager, or assistant manager agreed to participate in the incumbent worker survey by completing the survey and returning it via the mail:

Air Transport Command Restaurant
143 North DuPont Highway
New Castle, DE 19720

Alyson's Restaurant
Kirkwood Highway and Green Bank Road
Wilmington, DE 19808

Bellissimo Restaurant
3421 Kirkwood Highway
Wilmington, DE 19808

Bennigan's Restaurant
2015 Concord Pike
Wilmington, DE 19803

Burger King
3607 DuPont Highway
New Castle, DE 19720

Dempsey's Diner
Hares Corner
Wilmington, DE 19720

Grotto's
Brandywine Commons
Concord Pike
Wilmington, DE 19803

Ground Round Restaurant
1600 Rocky Run Parkway
Wilmington, DE 19803

Howard Johnson's
Concord Pike and Murphy Road
Wilmington, DE 19803

Italian Bristo
4301 Kirkwood Highway
Wilmington, DE 19803

Kentucky Fried Chicken
4303 Kirkwood Highway
Wilmington, DE 19808

Lone Star Restaurant
307 Rocky Run Parkway
Wilmington, DE 19803

Melting Pot Restaurant
Independence Mall
Wilmington, DE 19803

Pappy's Restaurant
Midway Shopping Center
Wilmington, DE 19808

Pizza Hut
3611 Kirkwood Highway
Wilmington, DE 19808

Ranch House Restaurant
4003 Concord Pike
Wilmington, DE 19803

Ruby Tuesdays
2308-A Concord Pike
Wilmington, DE 19803

Shucker's Pier 13
130 South DuPont Highway
New Castle, DE 19720

Sizzler Restaurant
Kirkwood Highway and Limestone Road
Wilmington, DE 19808

Steak and Ale Restaurant
4601 1/2 Kirkwood Highway
Wilmington, DE 19808

Taco Bell
4302 Kirkwood Highway
Wilmington, DE 19808

Taco Bell
1560 North DuPont Highway
New Castle, DE 19720

TGI Friday's
301 Rocky Run Parkway
Wilmington, DE 19803

Wendy's
1517 DuPont Highway
New Castle, DE 18720

APPENDIX

4

The following is a list of job descriptions from the U.S. Department of Labor's Dictionary of Occupational Titles (1991), which pertain to occupations in the food service industry.

311.677-010 **CAFETERIA ATTENDANT** (hotel & rest.) alternate titles: dining-room attendant, cafeteria; service attendant; cafeteria; table attendant, cafeteria; waiter/waitress

Carries trays from food counters to tables for cafeteria patrons. Carries dirty dishes to kitchen. Wipes tables and seats with dampened cloth. Sets tables with clean linens, sugar bowls, and condiments. May wrap clean silver in napkins. May circulate among diners and serve coffee and be designated **COFFEE SERVER**.

311.677-014 **COUNTER ATTENDANT, CAFETERIA** (hotel & rest.) alternate titles: server; steamtable attendant

Serves food from counters and steamtables to cafeteria patrons: Serves salads, vegetables, meat, breads, and cocktails, ladles soups and sauces, portions desserts, and fills beverage cups and glasses as indicated by customer. Adds relishes and garnishes according to instruction from Counter Supervisor. Scrubs and polishes counters, steamtables and other equipment. May replenish food at serving station. May brew coffee and tea. May carve meat. May accept payment for food, using cash register or adding machine to total check. May prepare and serve salads and be known as **SALAD COUNTER ATTENDANT.**

311.677-018 **DINING ROOM ATTENDANT** (hotel & rest.) alternate titles: bus person

Performs any combination of the following duties to facilitate food service: Carries dirty dishes from dining room to kitchen. Wipes table tops and chairs, using damp cloth. Replaces soiled table linens and sets tables with silverware and glassware. Replenishes supply of clean linen, silverware, glassware, and dishes in dining room. Supplies service bar with food such as soups, salads and desserts. Serves ice water and butter to patrons. Cleans and polishes glass shelves and doors of service bars and equipment such as coffee Urns and cream and milk dispensers. Makes coffee and fills fruit juice dispensers. May sweep and mop floors. May transfer food and dishes between floors of establishment, using dumbwaiter, and be designated Dumbwaiter Operator. May run errands and deliver food orders to offices and be designate **RUNNER**. May be designated according to type of activity or area of work as **CLEAN-UP HELPER, BANQUET, COUNTER DISH CARRIER, DISH CARRIER; GLASS WASHER and CARRIER; ROOM SERVICE ASSISTANT, STEAMTABLE WORKER, TABLE SETTER, AND WATER SERVER.**

313..74-010 **COOK, FAST FOOD** (hotel & rest.)

Prepares and cooks to order foods requiring short preparation time: Reads food order slip and receives verbal instructions as to food required by patron, and prepares and cooks food according to instructions. Prepares sandwiches (**SANDWICH MAKER**). Prepares salads and slices meats and cheese, using slicing machine (**PANTRY GOODS MAKER**. Cleans work area and food preparation equipment. May prepare beverages (**COFFEE MAKER**). May serve meals to patrons over counter.

313.374-014 **COOK, SHORT ORDER** (hotel & rest.)

Prepares food and serves restaurant patrons at counter or tables: Takes order from customer and cooks foods requiring short preparation time, according to customer requirements. Completes order from steamtable and serves customer at table or counter. Accepts payment and makes change, or writes charge slip. Carves meats, makes sandwiches, and brews coffee. May clean food preparation equipment and work area. May clean counter and tables.

313.684-010 **BAKER HELPER** (hotel & rest.)

Assists BAKER by performing any combination of following duties in bread-baking department: Carries and distributes supplies, such as flour, shortening, and baking pans. Mixes, kneads, and shapes dough for bread, rolls, muffins, or biscuits. Cuts dough into uniform portions. Greases pans used to mold or bake brads and lines pans with waxed paper. Places pans of dough into oven to bake. Removes baked products from oven. Cleans bakery utensils, equipment and work area. Performs other duties as described under **HELPER.**

313.687-010 **COOK HELPER, PASTRY** (hotel & rest.) alternate titles: bakeshop cleaner: pastry helper

Assists pastry shop workers, performing any combination of following duties: Carries and distributes supplies and equipment. Mixes, kneads, and shapes dough or batter to make pies, cakes, cookies, and other pastries. Washes and cuts up fruits for desserts and pies. Greases baking tins or lines them with waxed paper. Inserts cakes,

pies, and cookies into oven, and removes baked products. Portions pastries, desserts, and ice cream. Washes and scours pots, pans, and other equipment. Performs other duties as described under HELPER.

317.384-010 **SALAD MAKER** (hotel & rest.)

Prepares salads, fruits, melons, and gelatin desserts: Cleans vegetables, fruits, and berries for salads, relishes, and gelatin desserts. Mixes ingredients for green salads, fruit salads, and potato salad. Prepares relish plates of green onions, celery, radishes, and olives. Prepares dressings, such as Thousand Island, French, and Roquefort, to be served on green salads. Peels, cleans, and cuts fruits, to be served for breakfast or compotes. Prepares cold sandwiches and cheeses. Requisitions supplies daily.

317.664-010 **SANDWICH MAKER** (hotel & rest.) alternate titles: sandwich-counter attendant

Prepares sandwiches to individual order of customer: Receives sandwich orders from customers. Slices cold meat and cheese by hand or machine. Selects and cuts bread, such as white, whole wheat, or rye, and toasts or grills bread according to order. Places meat or fillings and garnish, such as chopped or sliced onion and lettuce, between brad slices. Prepares garnishes for sandwiches, such as sliced tomatoes and pickles. May fry hamburgers, bacon, steaks, and eggs for hot sandwiches. May butter bread slices, using knife.

317.687-010 **COOK HELPER** (hotel & rest.)

Assists workers engaged in preparing foods for hotels, restaurants, or ready-to-serve packages by performing any combinations of following duties: Washes, peels, cuts, and seeds vegetables and fruits. Cleans cuts, and grinds meats, poultry, and seafood. Dips food items in crumbs, flour, and batter to bread them. Stirs and strains soups and sauces. Weighs and measures designated ingredients. Carries pans, kettles, and trays of food to and from work stations, stove, and refrigerator. Stores foods in designated areas, utilizing knowledge of temperature requirements and food spoilage. Clean work areas, equipment and utensils, segregates and removes garbage, and steam-cleans or hoses garbage containers **KITCHEN HELPER.** Distributes supplies, utensils, and portable equipment using handtruck. May be designated according to worker assisted by **COOK HELPER, BROILER** or **FRY COOK HELPER, DESSERT; COOK HELPER, VEGETABLE; PANTRY GOODS MAKER HELPER.** Performs other duties as described under **HELPER** Master Title.

318.678-010 **KITCHEN HELPER** (hotel & rest.) alternate titles: cookee; cook helper; kitchen hand; kitchen porter; kitchen runner

Performs any combination of following duties to maintain kitchen work areas and restaurant equipment and utensils in clean and orderly condition: Sweeps and mops floors. Washes worktables, walls, refrigerators, and meat blocks. Segregates and removes trash and garbage and places it in designated containers. Steam-cleans or hoses-out garbage cans. Sorts bottles, and breaks disposable ones in bottle-crushing machine. Washes pots, pans and trays by hand. Scrapes food from dirty dishes and washes them by hand or places them in racks or on conveyor to dishwashing machine. Polishes silver,

suing burnishing-machine tumbler, chemical dip, buffing wheel, and hand cloth. Holds inverted glasses over revolving brushes to clean inside surfaces. Transfers supplies and equipment between storage and work areas by hand or by use of handtruck. Sets up banquet tables. Washes and peels vegetables, using knife or peeling machine. Loads or unloads truck picking up or delivering supplies and food.

319.678-010 **COUNTER-SUPPLY WORKER** (hotel & rest.)

Replenishes food and equipment at steamtables and serving counters of cafeteria to facilitate service to patrons: Carries food, dishes, trays and silverware from kitchen and supply departments to serving counters. Garnishes foods and positions them on table to ensure their visibility to patrons and convenience tin serving. Keeps assigned area and equipment free of spilled foods. Keeps shelves and vending machines stocked with food when working in automat.

APPENDIX

5

NEW CASTLE COUNTY VOCATIONAL TECHNICAL SCHOOL DISTRICT

Name _____

School _____

CULINARY ARTS

INDIVIDUAL STUDENT COMPETENCY PROFILE AND CRITERIA FOR CERTIFICATE

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 11/11	STANDARD 9/11	LIMITED 3/11
			I. Fundamentals of Culinary Arts		
			1. Complete job application		
			2. Complete job interview		
			3. Define importance of good job attendance		
			4. Complete interview of food service employee		
			5. Oral presentation comparing culinary operations		
			6. Complete job resume		
			7. Explain necessity of good public relations		
			8. Demonstrate effective telephone skills		
			9. Demonstrate effective communication		
			10. Obtain employment in Co-Op		
			11. Complete Senior Project		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 18/20	STANDARD 16/20	LIMITED 11/20
			II. Safety and Sanitation		
			1. Complete Right-to-Know form		
			2. Demonstrate knowledge of shop rules		
			3. Demonstrate proper handwashing procedure		
			4 Demonstrate proper grooming and wardrobe		
			5. Clean floors, woodwork, windows and counters		
			6. Clean and sanitize kitchen blocks and cutting boards		
			7. Wash dishes, glasses, flatware, pots and pans by hand		
			8. Wash dishes, glasses, flatware by machine		
			9. Point out all fire extinguisher locations and know school evacuation procedures		
			10. List orally procedures for emergency situations		
			11. Handle serviceware correctly		
			12. Identify at least 4 food-borne diseases		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 18/20	STANDARD 16/20	LIMITED 11/20
			13. List in order temperature requirement for safe, food handling and storage		
			14. Identify sources of kitchen pests		
			15. Demonstrate safe use and cleaning of dish machine		
			16. Classify types of fire		
			17. Perform health department inspection		
			18. Perform dining room sanitation and safety checks		
			19. Complete a worksheet on safety and sanitation in the dining room		
			20. Evaluate service situations concerning spillage		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 5/5	STANDARD 4/5	LIMITED 2/5
			III. Weights and Measures		
			1. Weigh items		
			2. Weigh and measure staple ingredients		
			3. Convert weights and measures		
			4. Convert recipe to larger and smaller yields		
			5. Portion food according to specification		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 19/22	STANDARD 16/22	LIMITED 9/22
			IV. Tools and Equipment		
			1. Identify hand tools & utensils		
			2. Demonstrate safe use & cleaning of hand tools and utensils		
			3. Identify equipment, slicers, ovens, mixers, etc.		
			4. Demonstrate safe use and cleaning of slicing machine		
			5. Demonstrate safe use and cleaning of table mixer		
			6. Demonstrate safe use and cleaning of garbage disposal		
			7. Demonstrate safe use and cleaning of food warmers		
			8. Demonstrate safe use and cleaning of proofing box		
			9. Demonstrate safe use and cleaning of microwave oven		
			10. Demonstrate safe use and cleaning of convection oven		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 19/22	STANDARD 16/22	LIMITED 9/22
			11. Demonstrate safe use and cleaning of conventional oven		
			12. Demonstrate safe use and cleaning of kitchen range		
			13. Demonstrate safe use and cleaning of floor mixers		
			14. Demonstrate safe use and cleaning of steamer		
			15. Demonstrate safe use and cleaning of deep fryer		
			16. Demonstrate safe use and cleaning of grills		
			17. Demonstrate safe use and cleaning of steam jacket kettle		
			18. Demonstrate safe use and cleaning of vegetable chopper		
			19. Demonstrate safe use and cleaning of food grinder		
			20. Demonstrate safe use and cleaning of broiler		
			21. Demonstrate safe use and cleaning of food processor		
			22. Demonstrate safe use and cleaning of vertical cutter-mixer		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 50/54	STANDARD 31/54	LIMITED 8/54
			V. Food Production and Preparation		
			1. Identify the food pyramid categories		
			2. Arrange food products in storage using FIFO system		
			3. Clean, trim, cut, and shred fruits and vegetables		
			4. Make sandwiches (hot and cold)		
			5. Identify specific seasonings, spices and herbs		
			6. Separate whites & yolks of fresh eggs		
			7. Grate cheese		
			8. Differentiate between breakfast, lunch and dinner items		
			9. Identify factors that determine food quality		
			10. Inspect incoming food for quality, freshness and weight		
			11. Make salads (mixed green, main course, gelatin, and marinated)		
			12. Make dressings (emulsified and cooked)		
			13. Prepare and evaluate pasta products		
			14. Prepare and evaluate rice using various methods		
			15. Prepare and evaluate potatoes using various methods		
			16. Prepare and evaluate vegetables using various methods		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 50/54	STANDARD 31/54	LIMITED 8/54
			17. Differentiate between spices and herbs		
			18. Make sauces		
			19. Make gravies		
			20. Prepare soup		
			21. Plan a menu		
			22. Prepare a braised meat entree		
			23. Prepare meat sauce		
			24. Prepare casserole entree		
			25. Prepare breaded deep fried entree		
			26 Prepare and evaluate pork entree		
			27 Prepare and evaluate chicken entree		
			28. Prepare and roast a poultry meat		
			29. Prepare baked fish		
			30. Prepare deviled eggs		
			31. Prepare a beef and pork roast		
			32. Prepare a nutritiously sound meal for breakfast, lunch and dinner		
			33. Complete chart on food handling and storage		
			34. Complete a food requisition practice form		
			35. Make appetizers		
			36. Make hor d'oeuvres and garnishes		
			37. Prepare stocks		
			38. Identify various meat cuts		
			39. Identify various poultry meats		
			40. Identify various seafoods		
			41. Cut, trim and bone meats		
			42. Cut, trim and bone poultry		
			43. Cut, trim and filet fish		
			44. Peel and clean shellfish		
			45. Clean and shuck mollusk shellfish		
			46 Prepare shellfish entree		
			47. Identify main classes of cheese		
			48. Demonstrate proper handling of cheese		
			49. Identify market forms of eggs		
			50. Prepare quiches		
			51. Prepare breakfast menu items using various methods		
			52. Prepare inventory records for purchased food		
			53. Maintain perpetual inventory		
			54. Price a menu		

DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY 29/31	STANDARD 20/31	LIMITED 11/31
			VI. Service Procedures Techniques		
			1. Identify desired qualities of food service		
			2. Set a complete breakfast cover		
			3. Set a complete luncheon cover		
			4 Set a complete dinner cover		
			5. Set a basic restaurant cover		
			6. Set a complete appetizer cover		
			7. Serve guests		
			8. Load and handle trays and bus boxes		
			9. Write and add guest check		
			10 Change a tablecloth		
			11. Identify types of service and their operation		
			12. Differentiate between table, buffet & banquet service		
			13. Write out duties and responsibilities for waiter/waitress		
			14. Write out duties and responsibilities for host/hostess		
			15. Write out duties and responsibilities for cashier		
			16. Write out duties and responsibilities for dining room attendants		
			17. Greet and serve guests		
			18. Fold napkins by various methods		
			19. Prepare and evaluate coffee		
			20. Prepare and evaluate iced tea		
			21. Prepare and evaluate hot chocolate		
			22. Differentiate between Russian, French and American Service		
			23 Set a basic banquet cover		
			24. Draw a dining room organizational chart		
			25. Complete seating and table chart		
			26. Write checklist for opening and closing duties in dining room		
			27. Define terms definitions of guest/employee relationships		
			28. Handle a guest complaint		
			29. Solve a problem concerning a special service situation		
			30. Demonstrate method of suggestive selling		
			31. Demonstrate product knowledge necessary for effective sales		

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DATE	MASTERY LEVEL	INST. INITIAL	EXEMPLARY /5	STANDARD /5	LIMITED /5
/5	/5	/5	VII. Baking		
			1. Prepare and evaluate cookies, biscuits, cornbread and muffins		
			2. Prepare and evaluate dinner rolls, breads and swee rolls		
			3. Prepare and evaluate cakes, custards, and pies		
			4. Ice cakes		
			5. Decorate cakes with borders and flowers		

APPENDIX

6

NEW CASTLE COUNTY VOCATIONAL-TECHNICAL SCHOOL DISTRICT
(Instructional Services Division)

CULINARY ARTS ADVISORY COMMITTEE MINUTES

FACILITATOR: Mr. Edward Crumlish
DATE OF MEETING: Monday, February 26, 1996
LOCATION: Marshallton Conference Room

ISSUES/IDEAS DISCUSSED:

There were three major topics for discussion at the meeting. The first topic was the activity packets. There was only one of the industry representatives from the committee who returned some additional scenarios for the expansion of the packets. Since we are in need of additional scenarios, the instructors were asked to identify situations where employees of the industry would use reading, writing, speaking, math, and science on the job. In addition to the instructors, all of the committee members are requested to identify some situations in which employees would use these five skill areas on the job.

The second topic involved having the district explore the possibility of increasing instructor awareness of and involvement in the IEP process for the special needs students. The idea of not limiting the students to the traditional program completion time of three years will be explored.

The third topic for discussion was a committee review of the 148 competencies of the New Castle County Vocational Technical School Districts Culinary Arts curriculum. This review was to make recommendations on which items should be included in the proposed Food Preparation curriculum for Special Needs students. A presentation was given by Mr. Stewart. The committee considered each of the 148 items to make a determination if each task was essential for the six identified entry level positions. The committee decided that the six identified entry level position exist for employment of the students entering the industry. After discussion, the task list was reduced to 108 employment skills. A committee member asked: "Are there jobs in the industry for these special needs students". There was some discussion generated by this question, but the response was that there are jobs in the industry for those students. The committee unanimously approved the new Food Prep curriculum for special needs students.

EFC/jr
pc: Committee Members
3/11/96

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